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ABSTRACT

This document is a thematically organized summary of the proceedings of a seminar that included presentations and reactions to presentations by a field of international researchers on the effects of worldwide structural change on employment, education, and training in the service sector. The papers presented are part of a 10-country study of labor market adjustment and the service sector that is being conducted by the Organisation for Economic Cooperation and Development's Centre for Educational Research and Innovation. The research findings presented in the seminar sessions address the following issues: (1) changing demographic profiles characterized by fewer youth and an aging work force; (2) rising minimum competency thresholds for many jobs, with the attendant danger of a polarized labor force of highly skilled and unskilled workers if effective education and training programs cannot be developed to bridge the gap; and (3) rapid internationalization of economic and labor forces resulting in international skill markets. A list of participants and their countries is included in the document. (KC)

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INTERNATIONAL SEMINAR ON THE EFFECTS OF STRUCTURAL CHANGE ON EMPLOYMENT AND EDUCATION AND TRAINING IN THE SERVICE SECTOR

A SUMMARY

U.S. Department of Labor
Elizabeth Dole, Secretary

Bureau of International Labor Affairs
Shellyn G. McCaffrey, Deputy Under Secretary

August 1989

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Under the joint sponsorship of the U.S. Department of Labor (DOL) and the Organization for Economic Cooperation and Development's Center for Educational Research and Innovation (OECD/CERI), an international seminar on the "Effects of Structural Change on Employment and Education and Training in the Service Sector" convened in Washington, D.C. on June 14 and 15, 1989. The structure of the seminar included presentations of papers or research-in-progress followed by the reactions of one or more respondents. A list of seminar participants is appended to this thematically organized summary of the seminar proceedings.

The papers are part of a 10-country study of labor market adjustment and the service sector that is being done under the auspices of the OECD's Center for Educational Research and Innovation. The project is funded in part by the U.S. Department of Labor, under Grant E-9-M-7-0112, "Technological Change and Human Resource Developments: The Service Sector." The project director is Dr. Robert W. Bednarzik, Senior Economist, Division of Foreign Economic Research.

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Participants were welcomed by Leonard Bierman, Associate Deputy Under Secretary for Labor Affairs, Janet Norwood, Commissioner of the U.S. Bureau of Labor Statistics, and Bruno Manno, Acting Assistant Secretary of Educational Research and Improvement in the U.S. Department of Education (ED). Dennis Chamot, of the AFL-CIO, and Denis Doyle, an educational consultant with the Hudson Institute, co-chaired the two days of sessions.

Prior to the opening session, Jarl Bengtsson of the OECD Secretariat provided an overview of the Project on Technological Change and Human Resources in the Service Sector. Ten nations--Belgium, France, Germany, Italy, Japan, the Netherlands, Norway, Sweden, the United States, and Yugoslavia--are active participants in the project. The service sector is viewed by these countries as a critical--if not the critical--component of an emerging new economy that is more knowledge-based and technical. These nations are also concerned about planning for the advent of the economic and political integration of the European Economic Community in 1992. In this new atmosphere, it is workforce skills and human capital that yield the real competitive edge. In order to better understand the process of structural change, the Human Resources Project is examining issues and factors that will or should affect employment, education, and training policies at least through the year 2000, among them the following:

- Changing demographic profiles characterized by fewer youth and an aging workforce
- Rising minimum competency thresholds for many jobs, with the attendant danger of a polarized labor force of highly skilled and unskilled workers if effective education and training programs cannot be developed to bridge the gap
- Rapid internationalization of economic and labor forces resulting in international skill markets

The research findings presented in the seminar sessions address these and related issues in preparation for an intergovernmental conference of policymakers to be held in the Netherlands in November, 1989.

Definition and Description of the Service Sector

In the post-World War II period, virtually all the industrialized nations have experienced enormous changes in their economies and their labor markets. Perhaps the most striking characteristic of this alteration is the rise of the service sector and its corollary--a decline in the proportion of the workforce employed in manufacturing and agriculture. According to Janet Norwood, in the United States, eight out of 10 workers are currently employed in the service producing industries. In the past six or seven years, the U.S. has gained 17 million service sector jobs.

Robert Bednarzik's research[1] indicates that a parallel trend has occurred in the nine other countries participating in the OECD/CERI Human Resources Project. While the pace of change has been variable, all the countries experienced an absolute increase in the number of workers employed in the service sector during the period 1960-1986. Available data indicate that in 1986, service sector jobs constituted over 60 percent of total employment in the Netherlands, Belgium, Norway, Sweden, and France and from 50 to 60 percent of total employment in Japan, Germany, and Italy. Only in Yugoslavia do service jobs represent less than half of all jobs. Bednarzik found only a weak relationship between industry mix and employment trends across the 10 nations. The total employment picture in individual countries varied greatly in the timeframe analyzed, with only the U.S., Japan, and Yugoslavia demonstrating continuous and uninterrupted employment growth.

Participants in the seminar agreed that the shift in labor market dominance from manufacturing to services represents a significant, long term restructuring of economies and employment that raises many issues and will continue to have far-reaching effects for the foreseeable future. For example, as Ms. Norwood noted, structural changes in industry may mean that many of the old ways of gauging economic expansion and contraction are now erroneous. Traditionally, for example, recessions have been predicted by studying the economic and employment trends of traditional industries. However, recent experience has shown that the service sector is much less affected by recession. There is, therefore, a need for analysts to learn to interpret data under new circumstances.

Particular care needs to be taken in defining the parameters of the service sector. As several presenters and commentators pointed out, despite some unfortunate stereotyping, this sector is not a monolithic repository of "bad" jobs. Bednarzik's analyses break services down into four subsectors or industries recommended by the International Labor Organization:

(1) Trade, restaurants, and hotels
(2) Transport and communication
(3) Finance, insurance, real estate, and business services
(4) Community, social, and persoral services[2]

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[1]Robert W. Bednarzik. (May 1989) "Employment Profile of the Service Sector in Selected OECD Countries." Draft report for the Project on Technological Change and Human Resource Development in the Service Sector. OECD/CERI.

[2]Analyses of the employment picture in subindustries within these subsectors are available in Mr. Bednarzik's paper.

High, medium, and low-skill jobs are found within each of these subsectors. While the public image of the service sector derives from the part-time, low skill jobs associated with fast food, in fact, data from eight of the ten countries show that the fastest growing subsector is finance, insurance, real estate, and business services. Jobs in these areas tend to be medium or high-skill. The health field is another high growth area with considerable skill requirements. However, as co-chair Dennis Chamot pointed out, a distinction must be made between "growth rate" and the absolute number of jobs that are added to a subsector.

Thierry Noyelle of Columbia University, who presented overviews of several papers prepared as the United States' contribution to the OECD/CERI Human Resources Project, noted that it is not only the public image of the service sector that is erroneous. Researchers tend to be oversimplistic in defining job quality. The research community must give some attention to the issue of how the skill levels of jobs are classified. Should definitions be based on wages, the education and training required to do a job, or the occupational content? Thus far in the research, low wages are automatically equated with low skills and minimal training. For the current employment climate, Noyelle feels this is the wrong definition. Based on his own research in the retail trade subsector of services, traditionally low wage, low skill sales jobs increasingly require a higher level of training.

The nature of the impact of technology on service sector jobs is variable and less direct than the impact on manufacturing, according to Isabelle Delfau of OECD/CERI. Certainly information technologies and office automation systems have brought great changes to the workplace throughout the service industries. Furthermore, the introduction of new technologies may interact with trends toward internationalization and de-regulation to produce significant impact on production growth and organizational change. However, there appears to be no fixed relationship between the introduction of technology and whether or not worker skills will need to be upgraded or downgraded. Short and long term effects can be detected. In the short run, the introduction of new technologies is most likely to cause a decrease in low skill jobs. Since many new jobs will have middle or high skill requirements, the least qualified workers may have difficulty in finding alternative employment.

As Mme Delfau and others pointed out, another issue that affects both the definition of the service sector and efforts to estimate the proportion of jobs that should be considered services is the increasing tendency for service activities to be embedded in other sectors, particularly manufacturing. In a paper entitled "Shifts in Employment, Occupational Structure and Educational Attainment: 1973, 1979 and 1987," American researchers Eileen Appelbaum and Peter Albin address the "good job/bad job" issue as well as the often false dichotomy between the goods and services sectors by proposing a taxonomy for classifying jobs that creates a distinction between those with high information and knowledge intensity and those with low

intensity. Both the traditionally defined services and manufacturing sectors were found to contain information and knowledge intensive sectors that have created over 9 million jobs with relatively high earnings potential since 1973. However, during the same period, the less knowledge and information intensive sectors created 11.2 million jobs, many of them part-time and the majority of them with median earnings considerably below the median for the traditional manufacturing sector.

Commenting on Mr. Bednarzik's work, Bengt Stymne of the Stockholm School of Economics acknowledged the difficulties of dealing with cross-national data. It is generally true that the service sector is expanding. However, there are some real and significant national differences. The issue is what we can learn from these. For example, Japan, Germany, Italy, and Yugoslavia have quite low proportions of employment in the service sector yet also show very strong economic growth. How can this be explained? Do these countries deliberately attempt to keep traditionally organized households intact by discouraging the development of certain portions of the service sector? Is this a model that should be described in more detail?

Olivier Bertrand, of France's Research Center for Occupational and Training Analysis, also spoke about the difficulties in making international comparisons. In their case studies of four service sector subindustries, he and Thierry Noyelle found that worker supply in the four countries studied varied a great deal in terms of the following factors:

- demographics
- economic situations (e.g, unemployment level)
- institutional constraints (e.g., labor regulations, overtime policies, the status of part-time and independent workers, the tax system, child care arrangements)
- social constraints (e.g., role of labor unions)
- cultural constraints (e.g., the status of women)

Russell Rumberger of the University of California at Santa Barbara cautioned that while we need better knowledge about the skill requirements of jobs and the distribution of skills within occupations, it would be a mistake to place too much emphasis on <u>specific</u> skills. More helpful would be research that focuses on generic <u>types</u> of skills (i.e., cognitive, manipulative, social) that are important in particular occupations or occupational clusters. Furthermore, such explorations should attempt to assess the career path variations within the various subsectors of the service industry. Larry Hirschhorn of the Wharton Center suggested using a broad taxonomy or epistemology of skills including: (1) diagnosis tasks; (2) design tasks; and (3) development tasks. In some jobs, one person may need the skills to accomplish all three types of tasks.

Demographics of the Workforce

In addition to clarifying the definition of the service sector, several presenters and commentators contributed to "setting the stage" for discussions of education and training issues in the service sector through descriptions of the demographic characteristics of the workforce. This section of the summary focuses on three segments of the workforce that are of particular interest and concern: female participation, the aging factor, and the participation of minorities and immigrants.

Women. Although female employment participation rates vary a good deal among nations, growth in the number of working women is a trend that warrants special consideration. In the U.S., according to Janet Norwood, women now comprise 45 percent of the labor force. The largest increase in labor market participation in recent years has been among wives and mothers; about half of all American children under the age of one have mothers who are working or looking for work. This fact, of course, raises significant issues concerning child care, parental leave, benefits, etc. for both public and employer policies. In these areas, the United States lags considerably in comparison with many European countries, particularly the Scandinavian nations.

Marianne Durand-Drouhin of the OECD Secretariat summarized available international data on employment of women--overall and specifically in the service sector.[3] Participation rates ranged from over 70 percent in the Scandinavian nations to less than 40 percent in Ireland and Spain. Generally speaking, Mme Durand-Drouhin found a relationship between countries with high rates of female labor market participation and a high proportion of service sector employment. Statistics show that of those women who work, the vast majority are employed in the service sector, ranging from 61 percent in Japan to 88 percent in the Netherlands. The largest number of women in all countries are employed in the community and social services subsector of the service industries, followed by retail sales.

Strong employment growth for women in the period 1979-85 has been mainly in the public service fields of health, education, and welfare, although the public service sector is not presently a high growth portion of services overall. Women in the United States and Australia have also shown strong employment gains in the business services subsector. In contrast, female employment in the retail trade actually declined or posted only modest gains in a number of countries.

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[3]Marianne Durand-Drouhin. (June 1989) "Skills and Employment of Women in the Service Sector: An International Perspective." Draft report. Some of Mme Durand-Drouhin's analyses are based on data for most European nations, Japan, Australia, the United States and Canada. Others are for subsets of this group.

For various reasons, females are more likely to work part-time than males. (More will be said about nonstandard forms of employment in a later section of this summary.) But even controlling for the number of hours worked and occupational differences, the relative earnings of women remain lower than those of men. In terms of educational attainment, the proportion of women who hold university degrees still lags behind men although the difference is less pronounced among the younger age cohorts. Not surprisingly, upward mobility for women is most easily attainable in the public service sector.

Based on the information that she was able to accumulate, Mme Durand-Drouhin concluded that for the foreseeable future, career mobility for women is likely to continue to be constrained. They will continue to be secretaries, clerks, teachers, nurses, and salespersons. While job opportunities for women are highly likely to expand in the health and welfare fields in conjunction with the aging of the population and <u>may</u> increase in areas such as marketing, communication, and leisure activities, there is currently little indication that women will move significantly into nontraditional fields such as engineering, science, and technology. Furthermore, there may be a slowing of job growth in some service areas where women have made inroads, such as banking and finance, and a significant decline in the number of teachers needed as the size of the youth population dwindles.

Why has there been so little change in the pattern of women's employment? Seminar participants offered a number of hypotheses. It is possible, for example, that many women are simply not interested in entering nontraditional fields such as engineering or technology. Despite the clearly documented fact that more women are working, many seek the types of jobs that allow them to find a balance between their commitments to family and to work; these jobs are largely found in the service sector. Commentators Heidi Hartmann and Peggy Connerton both noted that, in fact, the services sector has provided new employment opportunities to women over the years. As Ms. Hartmann pointed out, to the extent that women have been successful in increasing their share of mid- and high level positions, it has been largely in the service sector.

<u>Aging of the workforce</u>. There appeared to be a generally understood premise among seminar participants that the overall workforce is "graying" as the post-World War II bulge moves into middle age and the number of teenagers entering the labor force continues to slow. These two demographic trends, in combination with the fact that the number of women entering the workforce is also likely to slow down in the coming years, have some important implications for the service sector. As Janet Norwood pointed out, the retail trade industry in the United States has traditionally relied on women and young people for staffing its part-time sales positions. As these sources dry up, retail employers are increasingly turning to older workers, often retirees seeking to supplement their incomes.

Mr. Bednarzik examined the age distribution of workers in six countries (Belgium, Germany, France, Sweden, Japan, and the U.S.) across economic sectors and found the overall workforces of Germany and the United States to be surprisingly youthful (about 19 percent of the total were under 25 years of age) and slightly more likely to be working in agriculture (U.S.) or industry (Germany) than in the service sector. However, in all six countries, more older workers were employed in services than in industry, possibly indicating that older individuals are able to successfully shift from manufacturing to services or that people retire or otherwise leave industry at an earlier age.

Minorities and immigrants. For the United States in particular, but to some extent in parts of Europe as well, the proportion of racial or ethnic minorities and immigrants in the labor force is expected to increase in the coming years. In the U.S., projections are based on birth rates which are higher for Blacks and Hispanics than for the majority population. Janet Norwood noted that Hispanics already constitute a disproportionately large share of recent employment increase figures relative to their proportion in the population (7 percent).

Speaking from the perspective of a special concern with women's issues, Heidi Hartmann stated that probably 80 to 90 percent of the labor force growth in the United States can be attributed to immigrants, people of color, women, or all three. However, these populations tend to be employed in declining sectors of the labor market and are burdened with education and training deficits that make it difficult for them to shift to other sectors. The wage gap between minority and white women, which had approached parity in the 1970's, has drifted slightly apart again in the 1980's. The same is true for men.

Nonstandard Forms of Work.

Throughout the two days of seminar proceedings, presenters returned repeatedly to the issue of "contingent workers" and nonstandard forms of work. These terms are used to refer to part-time employment, self-employment, temporary work, short term or ad hoc contract work, and even those full-time employees who tend to "move on" to new jobs frequently. Thierry Noyelle presented a synopsis of research in this area conducted by Susan Christopherson as part of the U.S. contribution to the Human Resources Project.[4] Ms. Christopherson cites three major factors that have contributed to an increase in nonstandard forms of work:

(1) growing pressure on firms to control costs
(2) growing pressure on firms to achieve and retain greater flexibility in skill mix
(3) a dramatic transformation in the labor supply,

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[4]Susan Christopherson. (June 1989) "Emerging Patterns of Work." Draft report.

particularly the increase in female participation and a reconfiguration of the youth labor supply.

She believes that the increase in the contingent work force is, at least in the U.S., a structural phenomenon that is likely to stay with us.

Mr. Bednarzik also analyzed nonstandard forms of work in his data-based, international examination of the service sector. Cross-national comparisons are often difficult in this area since definitions of such concepts as part-time and temporary differ. Generally speaking, Mr. Bednarzik found that slightly more than 30 percent of employment in six countries (Sweden, Belgium, Germany, France, Japan, and the U.S.) was nonstandard. Nonstandard employment is more common in the services than in industry and women are more likely to hold nonstandard jobs than men. Industries that employ the largest proportions of women and young workers are also those with large percentages of nonstandard forms of work, e.g., hotels and eating places, business services and real estate, repair, personal services, the sanitary industry.

Olivier Bertrand presented findings from a set of case studies that he and Thierry Noyelle conducted of workplace changes in supermarkets, departments stores, software firms, and hospitals in France, Japan, Sweden, and the U.S. In each country, they found a rise in contingent employment, although the forms vary among countries and among industries. There is often a presumption that contingent jobs fall into the "bad" job category. However, Mssrs. Bertrand and Noyelle found that this is not necessarily the case. In some instances, contingent workers are better-paid than regular employees, often because they have better or different skills or because they are willing to work undesirable hours or days. If a firm is truly committed to training its employees, contingent workers are as likely to be included in training events as other employees.

The issue of contingent work generated a number of comments. Co-chair Dennis Chamot noted that the word "voluntary" is often associated with nonstandard forms of work in the sense that people choose to work part-time or be self-employed. He questioned the degree to which this is true. For example, in the U.S., day care options are limited and expensive. Is it correct to say that mothers "voluntarily" enter into part-time employment in order to coordinate family and work responsibilities? The same is true for individuals or families with handicapped dependents. He estimated that perhaps one-third of all part-time workers are actually involuntarily in that role. In contrast, according to Bengt Stymne, the <u>average</u> work week in Sweden is about 28.5 hours. The Swedish system offers workers many "contingent" choices and, in fact, until quite recently strongly discouraged mothers from working full-time.

The fact that more women than men are contingent workers concerned other presenters and commentators as well. Mme Durand-Drouhin made the point that in the public sector, nonstandard forms of work are often contractual and have regular hours, thus

affording incumbents some degree of job protection. In the private sector this may not as often be the case.

Henri Dieuzeide of the French Ministry of Education argued that for young people, temporary or contingent work is part of the educational process and growing up. The small income allows youth some independence and the opportunity to explore the world of work. His comments reinforced Mr. Bednarzik's conclusion that nonstandard employment is especially important for youth. However, there are some issues to be addressed. Are young people being exploited? Should they be better protected by labor policies? Do they become locked into a part-time frame of reference?

Ernest Linton, who has studied many higher education issues in the United States, pointed out that the use of part-time and adjunct faculty on college campuses is a special case of contingent employment. Over the next five to seven years, many older faculty are expected to retire, suggesting that the higher education institutions may rely even more heavily on teaching faculty who are only loosely connected to the ethos of the institution.

In response to a question about the role of temporary agencies, Mr. Noyelle responded that there is much misconception about these organizations. They are geared to "niche" labor and often provide their own training. In the U.S., approximately a million workers are placed through these agencies on a regular basis, but many more than that cycle through before taking regular positions. Thus, they assist in entry or re-entry to the labor market. Ms. Francoise Carre of the Massachusetts Institute of Technology noted that a good deal less is known about temporary work than about part-time work.

Education and Training Issues

The documentation of structural changes in the labor market, the wide variety of skill levels required by a growing and changing service sector, and the projected alterations in the demographic profile of the labor force all point to the need for an increased emphasis on education and training in the coming decades. According to Bruno Manno, Acting Assistant Secretary for Educational Research and Improvement in the U.S. Department of Education, employers are unanimous in their assessment that the typical American worker is underprepared for the available jobs. While the viability of establishing a direct, causal link between education, training, and productivity is somewhat tenuous, he cited one researcher's estimate that the American gross national product would be $86 billion higher today if students' standardized test score growth had continued the steady rise seen in the pre-1967 period.

Isabelle Delfau of OECD/CERI concurred that there is all too often a mismatch between available jobs and the educational attainment of potential workers. This may be a matter of

underpreparation or the wrong preparation. For example, Janet Norwood cited the controversy in the United States about supply and demand in the engineering field. (A shortage of engineers in Europe is also cited in the European Round Table of Industrialist's report Education and European Competence.) In America, the actual problem seems to be that while there are many engineers, they often are not trained in the engineering specialties currently in demand or their skills are outdated. While, as William Ford of Australia asserted, there is probably no such thing as over-education any more, Mme Delfau suggested that in some cases, employers may overstate their educational needs. Mr. Rumberger questioned whether Chief Executive Officers, supervisors, or national panels are the appropriate sources for determining the education and training levels necessary for specific jobs. Instead, we should be talking with job incumbents about the nature of their work and the skills that they use.

A number of seminar participants stressed that a critical component of successful learning is effort. Mr. Rumberger noted that much discussion of educational reform focuses on the capacity of our educational institutions, but we tend to forget or overlook the need for individual effort, which includes interest, motivation, and incentives. David Crawford, Chairman of the U.S. Commission on Workforce Quality and Labor Market Efficiency, agreed. One theme in the Commission's report (due for release in September 1989) will be ways of generating increased student effort. If college is the "middle-class" incentive for completing high school, what can serve the same purpose for the noncollege-bound? A possibility is new or enhanced kinds of relationships between school and work. Clifford Adelman, of the U.S. Department of Education, also cited data showing that the strongest correlate with college degree completion is a student's levels of effort and aspiration. Interestingly, in the United States, parents' levels of aspiration for their daughters (of all races) has risen, while aspirations for sons has dropped. This is reflected in college enrollment patterns where women now constitute 53 percent of the collective undergraduate student body. Their proportion of degrees earned has also increased.

Elementary/secondary education. The terms "threshold skills" and "minimum competencies" are used variously and synonymously to refer to the baseline education that publicly supported schools should provide. Isabelle Delfau outlined the educational requirements that are thought to be essential in the technological workplace of the 1980's and beyond:

(1) a solid general education, including the theoretical knowledge needed to solve practical problems;

(2) the ability to deal with nonroutine tasks and problems;

(3) willingness to learn and the ability to "shift gears" or adapt to new situations and conditions;

(4) good communication skills and attitudes that foster team spirit and team work.

The concept of teaching higher order thinking and problem solving skills to all students is in itself a revolution in education. In previous generations, the type of instruction that developed higher order skills was reserved for the academic elite--the perhaps five to 10 percent of the population who would be expected to go on for higher education before assuming leadership or management roles in the workplace. Perhaps in part inspired by the Japanese example where a thorough and effective basic education is an expectation far down in the worker ranks, the western nations are critically examining their curricula and instructional practices. In many cases, there appears to be a long way to go.

Mme Delfau suggested that we must identify and specify the knowledge base that is essential for workers in the service sector. In addition to basic skills, reasoning skills, communications skills, and technology literacy, certain values, attitudes, and critical perspectives appear to be important ingredients for success in service sector jobs. Although these are not new "subjects" to be added to the curriculum and taught directly, they can be reinforced and encouraged in the classroom. Teachers and instructional practice thus become a large part of the answer. In order to be successful in preparing students, teachers need more exposure to the real world, including technological knowledge and confidence and nonteaching experience. She endorsed the idea of encouraging alternate routes to teaching and easing mid-career entry to the profession, approaches that were also supported by Mr. Manno of the U.S. Department of Education.

Charles Benson of the National Center for Research in Vocational Education at the University of California-Berkeley, described the typical American secondary school as a "lockstep institution" characterized by passive students, de facto tracking, and isolation from the outside world. In other countries, secondary school tracking operates more openly and often with better links between schools and the workplace (e.g, the German apprenticeship system). However, Mme Durand-Drouhin's analyses of vocational training completion rates in four European nations and Australia indicates that females are being badly served by this sector of the education and training system. One important reform advocated by Dr. Benson is significant expansion of opportunities for structured, closely supervised work experiences for secondary school students. In contrast to unsupervised work experience or the after school jobs that students locate for themselves, research shows that structured on-the-job training yields greater progress in terms of both skills and attitudes toward work.

In the current climate of emphasis on higher order skills, secondary vocational education is particularly vulnerable to attack in the United States. Dr. Benson advocated a number of strategies for American high schools that would make them more compatible with the world of work:

- more flexibility in terms of assessing student progress
- more flexibility in the duration of required schooling
- greater collegiality and cooperation in schools and classrooms
- better integration of academic and vocational education

Higher education. According to Peggy Connerton of the U.S. Service Employees International Union, 22 percent of all jobs currently require a college degree; projections are that in ten years, this proportion will rise to about one-third. Mr. Bednarzik's analysis of data from five nations shows that the educational attainment of workers is rising in all industries. This trend holds for both secondary school and college completion. There is no question that certain subsectors of the service industry--particularly finance and business services and community, social, and personal services--employ the largest proportions of individuals with university or college educational attainment levels. However, in a number of countries, the rate of change in the proportion of college-educated employees is higher for agriculture and manufacturing than for the service industries.

The European Round Table, represented at the seminar by Ms. Kerstin Keen of the Volvo Competence Corporation, analyzed the higher education systems of the United States, Europe, and Japan and found that, on a relative basis, Japan produces the largest number of undergraduate and graduate degrees while the U.S. leads in post-graduate degrees. The Round Table concluded that there is a general decline in emphasis on higher education in the western European nations that is at odds with the requirements of industry. Their recommendations include greater cooperation between business and the universities, greater emphasis in the higher education institutions on continuous education, new programs to prepare professors for new technological areas and other fields experiencing rapid growth, and greater compatibility and transferability of minimum qualifications and degrees. To meet the management needs of the EEC countries, the Round Table proposes a common European business degree similar to the American MBA--perhaps to be called the European Business Qualification (EBQ).

Clifford Adelman, of the U.S. Department of Education, suggested that the American experience in higher education offers some lessons that could be useful to western European nations. The United States has collected longitudinal data on the educational and employment experiences of representative samples of young people who graduated from high school in 1972 and 1980. Among those who have attended college, analyses of their course-taking patterns indicate that males take a good deal more math and science, while females dominate enrollments in literature, foreign languages, and psychology. Since business and industry tend to value a quantitative educational background over the humanities, college educated men are thus at an advantage in obtaining middle and high level jobs.

Mr. Adelman also cautioned the Europeans to look carefully at the idea of a pan-European business degree. In the U.S., the business major, particularly at the undergraduate level, is all too frequently a weak, watered down program of studies. He suggested that both America and Europe might learn from the Japanese who seem to know how to use humanities graduates effectively in industry. The bottom line, he asserted, is not the name of the degree or the major but the quality of what the student studied.

Larry Hirschhorn, of the Wharton Center for Applied Research at the University of Pennsylvania, also spoke in support of the value of a general liberal arts education. In his view, critical thinking is best developed through this route. However, the typical liberal arts program needs improvements in helping students become more self-aware of the relationships between (1) content and different methods of learning; (2) cognition and how to learn from experience; and (3) synthesis and analysis.

Training and adult education. Many activities designed to prepare or upgrade the skills of workers occur outside the formal educational organizations. In a paper entitled "Adult Education and Training Markets," Nevzer Stacey and Duc-Le To of the U.S. Department of Education propose a typology for classifying adult participation in education and training programs.[5] In addition to the familiar school-based providers, the typology includes work-based providers (employers, unions, public sector agencies, etc.) and community-based providers (churches, civic associations). Drawing on a 1983 U.S. Bureau of Labor Statistics survey, the authors estimated that work-based training accounted for 55 percent of all training occurrences in that year. Other data allowing comparisons between 1978 and 1984 confirm a distinct shift in the locus of adult education, away from educational organizations and toward employers or other providers.

William Ford, of Australia's University of New South Wales, has made an extensive study of new developments in the post-school preparation of the workforce. Rejecting the term "training" as something that is done to animals, Ford spoke about innovative efforts in a number of businesses to enhance "skill formation" in their employees. The skill formation idea is German in origin but has been developed and refined by the Japanese. Strategies associated with the approach are small group activities (quality circles), information sharing/learning, role rotation and "just-in-time" skill formation rather than "catch-up" training. Based on his research and observations, Ford proposed the following key conceptual shifts in the ways that we think about employee development:

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[5]Nevzer Stacey and Duc-Le To. (1989) "Adult Education and Training Markets." Draft report.

From	To
education and training	skill formation
on-the-job training	on-the-job learning
division of labor	balance of skills
learning leave	learning time
labor markets	skill markets
skill structures	skill dynamics
skill demarcation	skill integration
stable systems	incremental innovation
fragmentation	fusion and integration

Anthony Carnevale of the American Society for Training and Development responded positively to the ideas presented by Mr. Ford but questioned the state of our knowledge about the effectiveness of learning through functional applications. The context for learning, he noted, is slipping out of the traditional "boxes." We can no longer talk about teaching as something that one person does to other people; rather, we must think in terms of learning systems where there is a more interactive flow between practice and theory, between workers, and between workers and trainers.

Another commentator--Margaret Hilton of the U.S. Congress' Office of Technology Assessment--stated that she is somewhat cynical about the skill formation movement specifically and innovative approaches in the business world generally. Citing her own experience with the Communication Workers of America, Ms. Hilton questioned whether new approaches to personnel development can succeed in the face of "traditional mindsets" among corporate leadership. She is also skeptical about the "just-in-time," philosophy on the grounds that (1) it is not appropriate for all businesses and (2) it puts workers under a great deal of pressure and stress. Her own observation is that the current trend in training is toward more classroom-based activities rather than on-the-job learning experiences.

Speaking from the Japanese perspective, Machiko Osawa noted some differences about her country's business culture that may make the skill formation approach more appropriate there than elsewhere. In contrast with the U.S. (where Ms. Osawa studied for a number of years), Japanese students focus on what company they want to work for instead of on what they want to be. When they are hired, their commitment to the firm is total and, generally speaking, for life. Substantial training occurs in the early years of employment and is matched by a steep earnings profile quite early in a worker's career. Typically, the on-the-job training provided is highly specific to a particular company and therefore is not transportable. In contrast to this pattern, there is a great deal more employment mobility in the United States. Young workers, in particular, tend to "job hop" for several years before settling down. Employers, therefore, are often reluctant to invest in human capital that may shortly disappear. One possible remedy for this, suggested by David Crawford, Chairman of the U.S. Commission on Workforce Quality and Labor Market Efficiency, is the encouragement of training provided by cost-sharing employer combines.

Michael Feuer, of the Office of Technology Assessment, observed that firm-financed training generally involves job-related behaviors but not the improvement or remediation of basic skills or the development of higher order thinking skills. Since, as Isabelle Delfau pointed out, as much as 20 percent of the adult population may be functionally illiterate, there is a real problem of access in adult education. Those who need education and training most may have the least opportunity to obtain it. Furthermore, Mr. Feuer noted, access to training may be related to the employability or promotability signals that good workers are able to transmit, indicating that they are a worthwhile investment. Thus, those with better skills to begin with get more training, while those with the greatest need get none.

Policy Issues

A central policy issue addressed by the seminar is the relationship between public and private responsibility for education and training (or skill formation). A presentation by Roeland in't Veld of Erasmus University in the Netherlands directly addressed the issue of the intensity of public intervention in workforce training. In his view, the trend in Europe is toward privatization, as governments retreat from the direct financing and provision of training in favor of a monitoring role.

Mr. in't Veld suggested that public policymakers might seek guidelines for developing a more rational policy structure for education and training in the policies typically adopted for science and technology. In that arena, governments directly fund basic research because its outcomes are perceived to be for the collective good of the population. Applied research and development activities leading to marketable products, on the other hand, are generally financed by the private sector. In terms of education and training, programs serving disadvantaged or immigrant populations might be considered pro bono and therefore the financial responsibility of governments; otherwise, the appropriate government role would be monitoring and occasional intervention to forestall abuse of policies or regulations.

A key feature of the policy picture painted by Mr. in't Veld would be an increased training role for the education world--particularly the universities. Citing the growing tendency of large conglomerates to turn to universities for their R&D work, he suggested that the business world should also consider higher education institutions as prime providers for training and retraining in advanced scientific and technological skills. The internal training provided by enterprises should be complementary to, not competing with, universities, vocational schools, and other institutions dedicated to education or training.

Isabelle Delfau also stressed the need for rethinking the division of responsibilities in education and training. She

suggested that creative and effective new approaches to policy must reconsider the traditional relationships between:

- the public and private sectors
- education and labor policy
- initial and ongoing education
- general and vocational education

In terms of public and private sector responsibilities, Anthony Carnevale noted that a continuing problem in the public sector is the lack of accountability that results from the fact that it is not market-driven. In the United States, the Job Training Partnership Act (JTPA), administered by the Department of Labor, has attempted to counter this weakness by establishing performance standards for training providers. However, as David Williams pointed out, JTPA has targeting problems that highlight the essential tension between quality and equality. In order to meet performance standards, providers may select participants with less need for services.

Particularly in the United States, given its present and projected demographics, the issue of a dual economy and wide economic disparities between the "haves" and "have nots" is a constant concern. Both Janet Norwood and David Williams affirmed the federal government's commitment and responsibility to special education and training programs for underserved, disadvantaged and-or limited English speaking populations who may otherwise have limited access to skill improvement vehicles. David Crawford criticized the lack of U.S. commitment to adult basic education and lifelong education, citing expansion of "second chance" delivery systems and a reduction in the number of adult illiterates as prime areas for policy recommendations in the upcoming report of the U.S. Commission on Workforce Quality.

Another policy issue raised by Mr. in't Veld's presentation is the fragmentation of education and training policies, particularly in Europe and the United States. He described some efforts in three Asian nations (Singapore, Hong Kong, and Korea) to intervene strongly in training policy while at the same time creating synergistic inter-ministry structures to avoid duplication of effort. Commenting on Mr. in't Veld's paper, Werner Clement of Wirtschafts University in Austria remained skeptical that any optimal, generalizable models for better or more rational policymaking can be identified; individual nations are too idiosyncratic in terms of their habits, vested interests, and attitudes about who does what. Nevertheless, the issue of fragmentation is clearly a concern and one that reappeared several times over the course of the two-day meeting.

The European industrialists who meet as the European Round Table are particularly concerned with moving toward an integration of education and training policy across all the nations participating in the European Economic Community. They recommend a concept that they call EURED--European Unified Research into Educational Development--as a framework. EURED would be based on cooperation between:

- o legislative and regulatory bodies
- o providers of education
- o users of education, including industry and the service sector

The goal of EURED would be comparability and transferability of standards and credentials across national boundaries. The ERT also asserts that English is becoming the common language of Europe; therefore, all students should know English, their own language, and two others that are commonly used in the EEC. Working as individuals and as a group, the Round Table will encourage EEC governments and ministries to adopt their recommended policies.

Coordinating multiple public policy areas is also of great concern in the United States. More than one commentator noted that America has a fiscal/monetary/tax policy but no real employment policy. Few legalities govern employment beyond an individual firm's personnel policies and union contracts. By taxing training, current tax policy creates a bias against the type of investment that would (1) improve worker skills, (2) presumably raise income, and (3) foster lifelong learning. Child care assistance and parental leave policies are also left up to individual employers, with little or no government guidance or regulation. Several pieces of legislation on these issues are pending. However, as Charles Benson reminded seminar participants, the cost of providing optimal education and training programs is high. We need policy structures that allow the public and private sectors to share costs for improving the skill level of the national workforce.

Some positive steps toward better communication between policymaking agencies are evident in the United States. For example, the Departments of Education and Labor are currently co-sponsoring the U.S. Commission on Workforce Quality and Labor Market Efficiency. Earlier, the Departments of Education, Labor, and Commerce worked together to produce a report entitled The Bottom Line: Basic Skills in the Workplace, which examines workplace literary.

Areas for Further Research

Over the course of the seminar, presenters and commentators identified several areas where new or additional research would help clarify factors, issues, or trends that are associated with the impact of structural change on education, training, and employment in the service sector. The national reports being prepared for OECD's Project on Technological Change and Human Resources in the Service Sector have combined micro- and macro-analytic strategies. There was a general consensus that this was a sensible approach. As Thierry Noyelle noted, macro-economic views can be quite disheartening. However, the micro (case) studies tend to be more positive about the training going on and the adaptation to change in specific industries or even specific companies. William Ford found that the case study approach yields insights and provides ideas for challenging the conceptual framework of future research. Francoise Carre also

supported the case study approach because patterns tend to wash out in the aggregate.

Specific suggestions for additional research and the source of the comment are listed below:

(1) Analyses should look at unemployment as well as employment levels. One hypothesis might be that service sector functions can help overcome structural rigidities or frictions that hinder structural reorganization. Some or all of the service industries may play a mediating role ultimately leading to less unemployment. (Bengt Stymne)

(2) Denis Doyle asked Mr. Bednarzik and Mme Delfau whether the data available are adequate for their international comparisons. There is a need for different sets of data, i.e., exports/imports, gross national products. (Delfau) International data on services within other industries would also be useful. In general, obtaining comparable data is up to the persistence of the individual researcher. There is some slight improvement in the comparability of data for European nations because of the introduction of Eurostat. (Bednarzik)

(3) Despite global generalizations about the rise of the service sector, national differences continue to exist. What is the relationship between low employment in services and strong economic growth in countries like Japan, Germany, and Yugoslavia? (Bengt Stymne) How do factors such as demographics, unemployment levels, institutional constraints, social constraints, and cultural constraints affect worker supply for the service sector in various countries? (Olivier Bertrand)

(4) How can research on sectoral change be linked to a macro-theory of post-industrial development? (Larry Hirschhorn)

(5) What is the relationship between training and organizational development? (Larry Hirschhorn)

(6) We need to know the skill requirements of jobs and the distribution of skills within occupations, with emphasis on types of skills rather than specific skills. (Russell Rumberger)

(7) For women, wage and scale requirements may diverge. What are the specific national conditions governing women's participation in the labor market generally and the service sector specifically? (Francoise Carre)

(8) What are youth's expectations for long-term employment? Have they changed? How does their heavy participation

in the part-time labor market affect their overall attitude toward work? (Francoise Carre)

(9) The business services industry appears to be important to the magnitude of employment growth in several countries and employs many contingent workers and/or those on nonstandard schedules. A clear profile of the workers in this industry must be developed--including wages and fringe benefits, training availability, career paths, etc. (Robert Bednarzik)

(10) Mr. Ford noted that there is a transformation of technologies occurring in successful enterprises. Technological investment is occurring less for traditional cost-cutting or labor-saving reasons. Rather, it is being implemented to improve the quality of employment, environment, productivity, and service. What is the extent of this phenomenon? How does it vary by industry? What does it imply for evaluating the employment effects of new technology?

(11) Older, and to a lesser extent younger, workers are more likely to work in services than in industry. The reverse is the case for prime-age workers. Can these prime-age workers readily move to service sector job if necessary? What is the nature of the jobs that older service sector workers hold? (Robert Bednarzik)

(12) Mme Delfau noted that all too often there is a mismatch between available jobs and the educational level of workers. Ms. Norwood cited some of the occupations in the U.S. that are beginning to experience shortages. To what extent can retraining systems help resolve this problem? To what extent are there skilled workers available but unaware of job openings? How much of the problem can be attributed to labor market inefficiencies as opposed to a skills gap?

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